

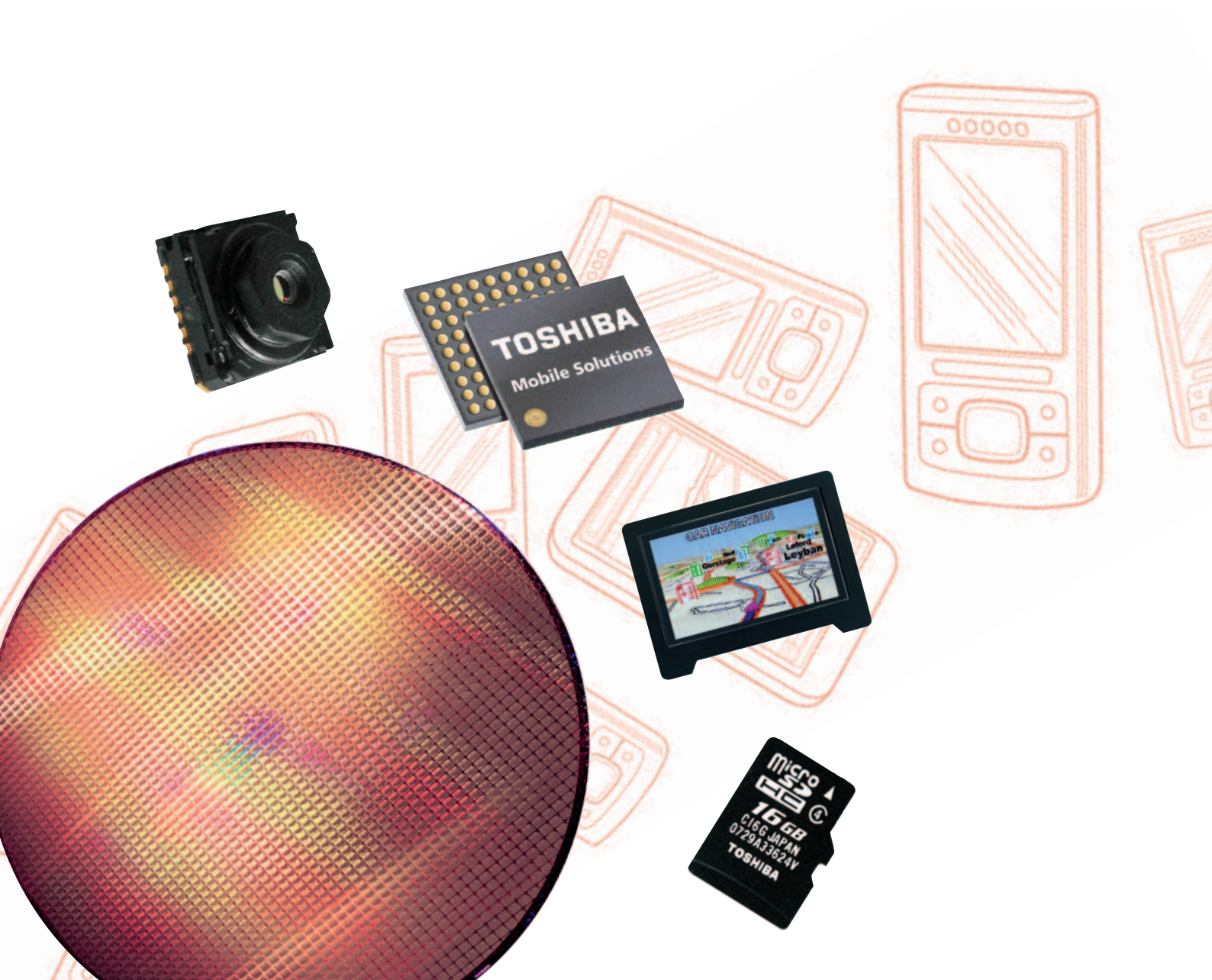
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> TC358763 SERIALIZER DISPLAY BRIDGE

Parallel to MIPI® DSI converter bridge



> TC358763 SERIALIZER DISPLAY BRIDGE

HIGHLIGHTS

- > Serializer display bridge for connectivity of MIPI® DSI panels to the Baseband or Application Processor using legacy parallel LCD interfaces
- > Solutions are based on the latest versions of industry standard MIPI DSI 1.01 interface to ensure highspeed data rates of up to 500 Mbps per lane
- > Legacy interfaces such as MIPI DPI and MIPI DBI are supported as Host interfaces
- > Applicable to a range of mobile product platforms such as smartphones, netbooks, smartbooks, MIDs and PNDs

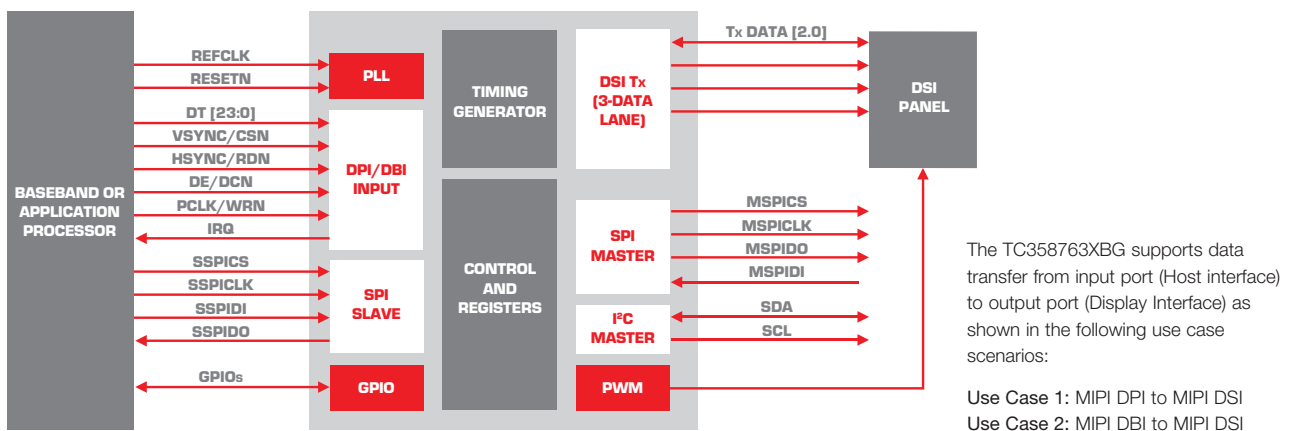
DESCRIPTION

The Toshiba TC358763XBG serializer display bridge is optimised for mobile handsets using a high-resolution display panel with MIPI® Display Serial Interface (DSI) connectivity. As mobile handsets are integrating higher resolutions, wider color depth, and larger sized displays, panels with high speed serial interface protocols are becoming a more suitable solution.

The TC358763XBG bridge supports legacy display interface protocols such as the MIPI Display Pixel Interface (DPI) and the MIPI Display Bus Interface (DBI) as Host interfaces; and serializes the data to enable connectivity to panel with MIPI DSI protocol. The bridge supports MIPI DSI connectivity on the panel side with up to 500 Mbps per data lane times three data lanes.

The TC358763XBG is a 72-pin device in a small 4.5mm x 4.5mm body, 1.0mm height package with 0.4mm ball pitch suitable for mobile applications.

> SYSTEM BLOCK DIAGRAM OF TC358763XBG



FEATURES

> LCD module interface

- MIPI DSI-TX Data 3-lane, CLK 1-lane with data rates up to 500 Mbps/lane
- Support for qHD-size LCD panel
- Output format: RGB888, RGB666 and RGB565

> Host interface

- MIPI DPI 24-bit bus interface
- MIPI DBI Type-B 16-bit bus interface
 - 18-bit bus RGB 666 format supported. When this format is selected, the valid command and data bus width is 16 bit.

> Serial input interface

- 3 or 4-wire 8-bit SPI synchronous transfer
- 3-wire 9-bit SSI synchronous transfer

> Peripheral control ports

- SPI or SSI serial I/F ports
- Single I²C serial I/F port
- Up to 13 General Purpose I/O ports
- One PWM signal for LED intensity control

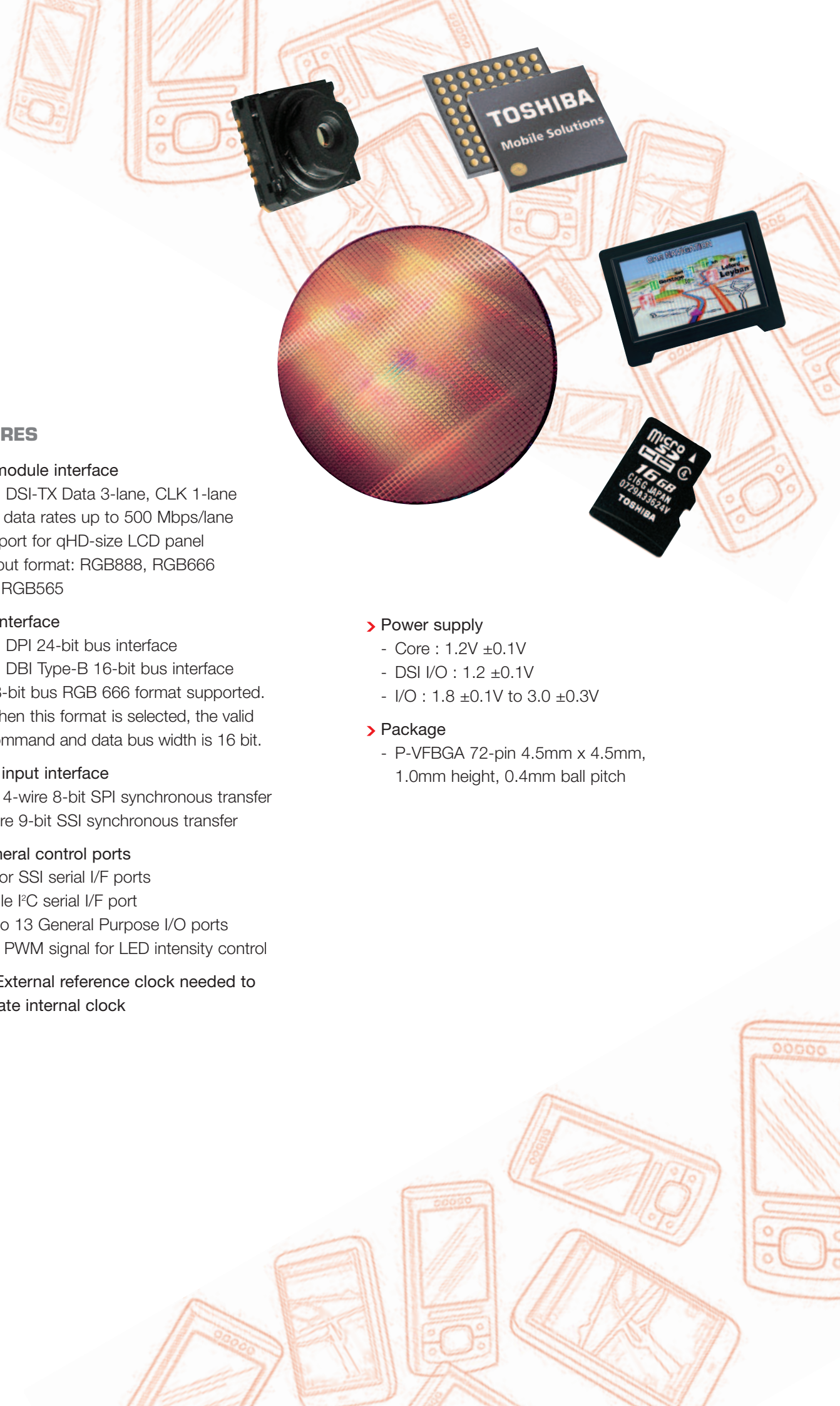
> PLL: External reference clock needed to generate internal clock

> Power supply

- Core : 1.2V \pm 0.1V
- DSI I/O : 1.2 \pm 0.1V
- I/O : 1.8 \pm 0.1V to 3.0 \pm 0.3V

> Package

- P-VFBGA 72-pin 4.5mm x 4.5mm, 1.0mm height, 0.4mm ball pitch





GENERAL INFORMATION

> Other Mobile Peripheral Devices

- IO Expander
- TV out controller
- DisplayPort™ controller
- MIPI® and MDDI® display controller with buffer
- MIPI® and MDDI® hubs and bridges
- MIPI® camera interface bridge chips

You can find further information about Toshiba Mobile Peripheral Devices at www.toshiba-components.com/mobile

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